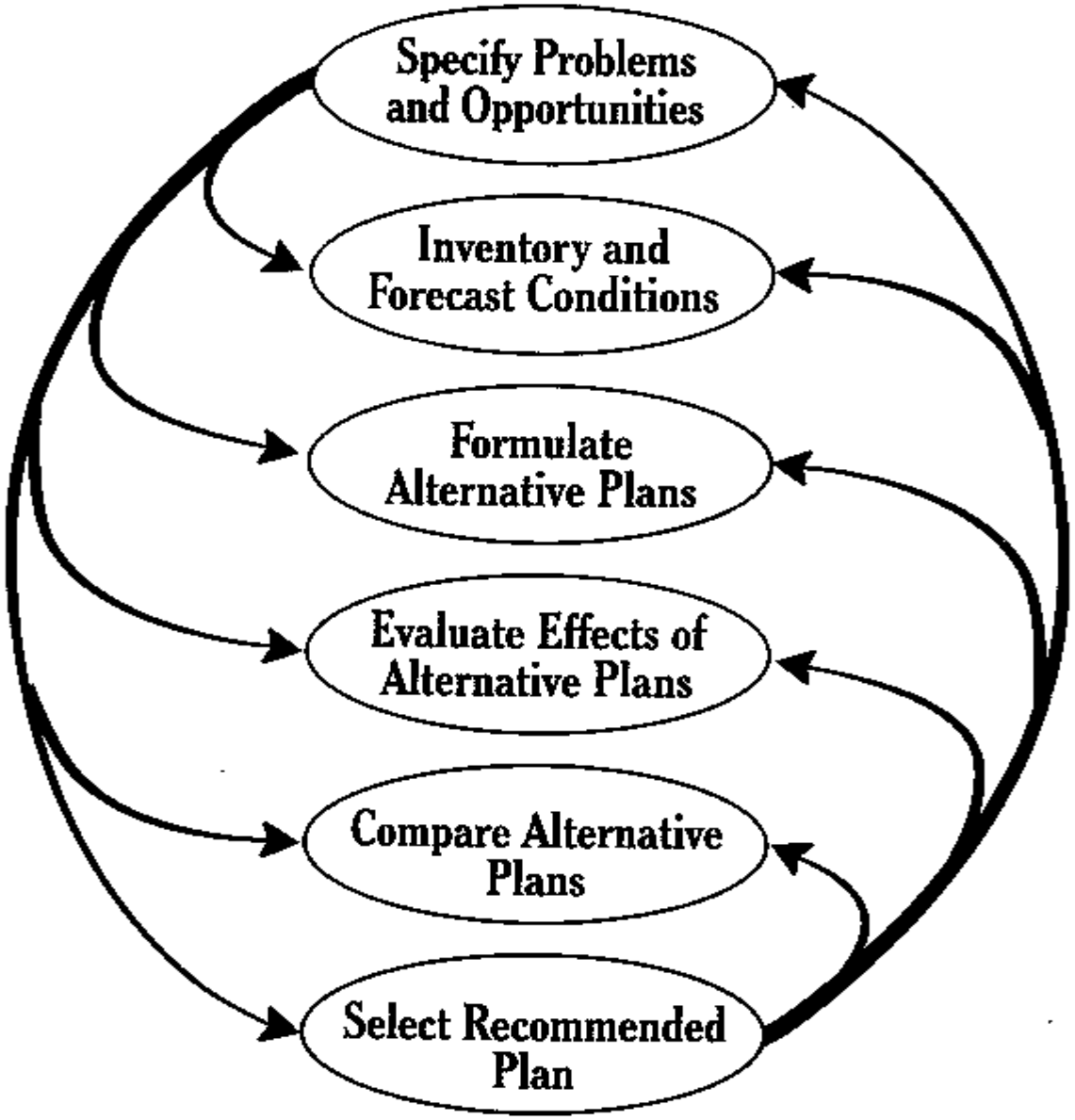
PLANNING PROCESS



STEP 3 - FORMULATION

BRAINSTORMING MANAGEMENT MEASURES

BRAINSTORMING MANAGEMENT MEASURES

- Workbook
- ER 1105-2-100 - not covered
- Planning Manual - Chapter 8

BRAINSTORMING MANAGEMENT MEASURES

LEARNING OBJECTIVES

- Brainstorming Rules
- Brainstorming Process
- Flip Chart Technology

BRAINSTORMING RULES

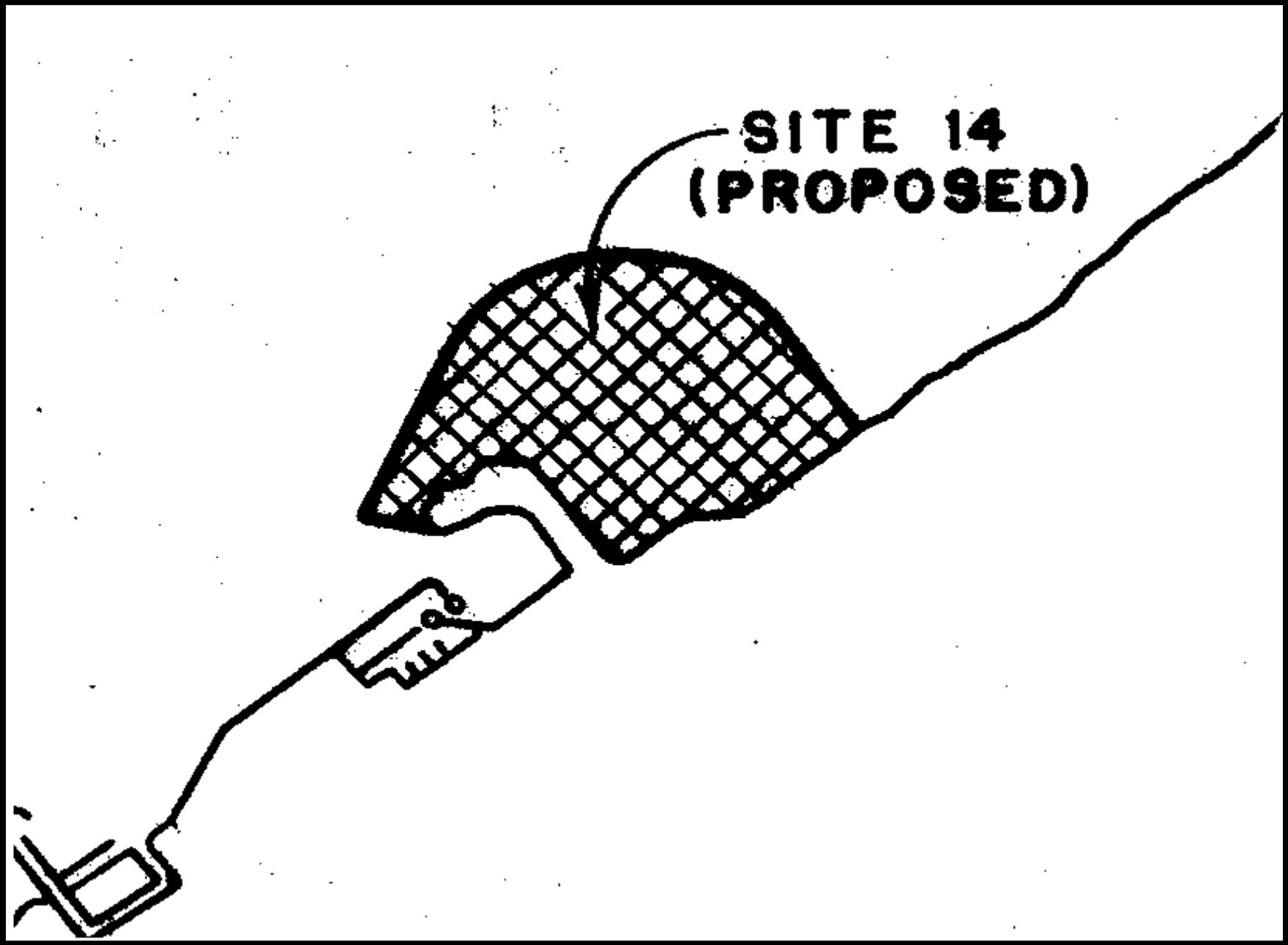
- *NO EVALUATION*
- *NO JUDGMENT*

- Quantity counts.
- Time is limited.
- Follow the process.

BRAINSTORMING PROCESS

1. Define problem.
2. Individual silent listing of ideas.
3. Group recording of ideas.

- Group assessment of ideas.
- Group presentations.


SITE 14
(PROPOSED)

Without condition = Without any action to solve the problem at hand.

WHAT'S THE PROBLEM?	**WHAT'S THE SOLUTION?**
Fish kills at dredged material disposal site 14.	???
Disposal of polluted dredged material from Cleveland Harbor.	Site 14 and other sites.
Movement of goods.	Cleveland Harbor navigation channels.

GROUP ASSESSMENT OF IDEAS

\# Number of Ideas

* Recommended Idea

** Most Creative Idea

WHAT CAN YOU BRAINSTORM?

- Stakeholders
- Problems and Opportunities
- Information to Include in Inventory
- Future Without Condition Assumptions
- Solutions - Measures and Plans
- Categories of Effects
- Tasks in Project Study Plan
- Report “Table of Contents”
- Report Readers
- Mailing List

FLIP CHART TECHNOLOGY

- Record
- Summariz
  e
- Evaluate

BRAINSTORMING MANAGEMENT MEASURES

LESSON REVIEW

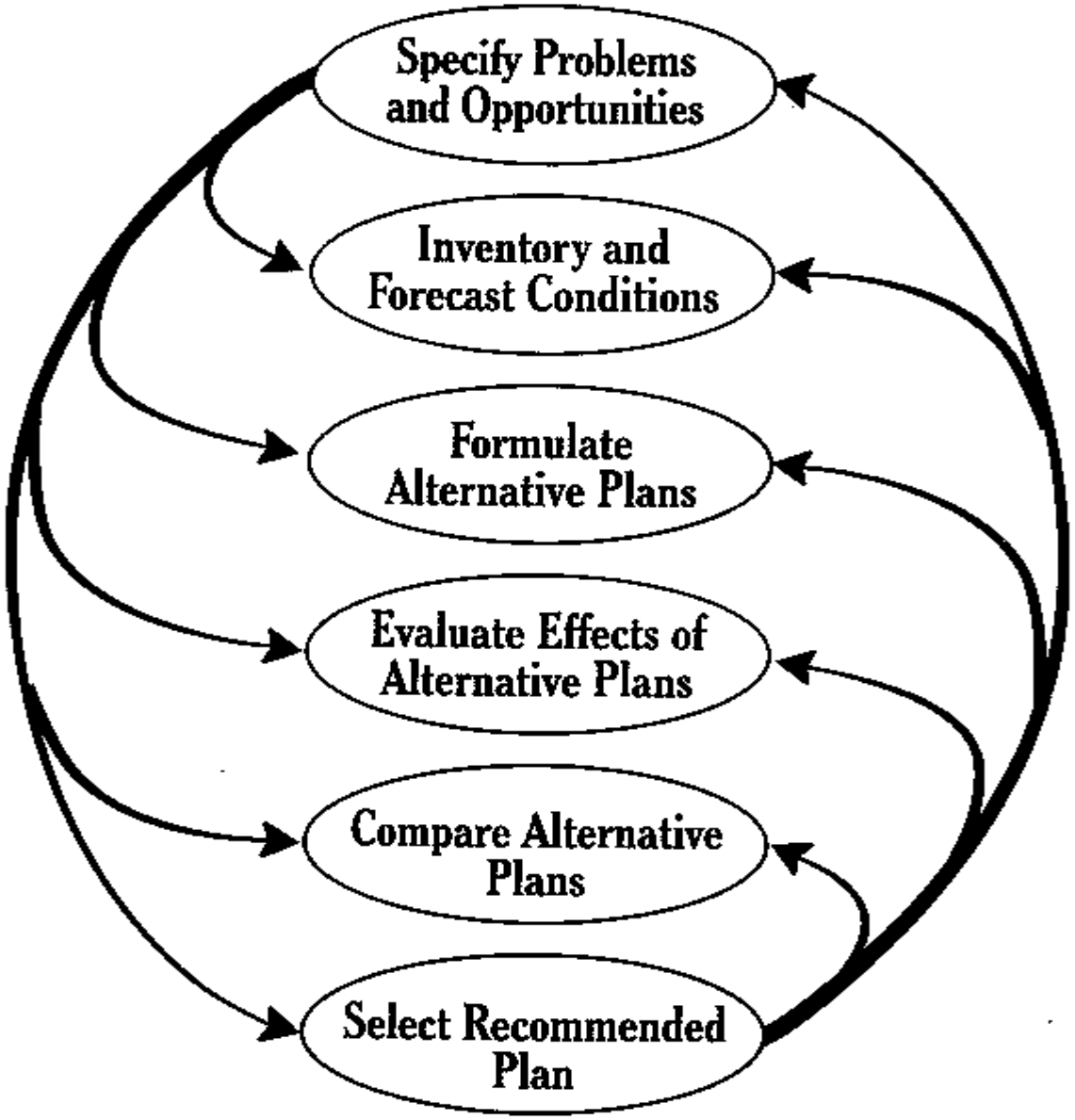
- Brainstorming Rules
- Brainstorming Process
- Flip Chart Technology

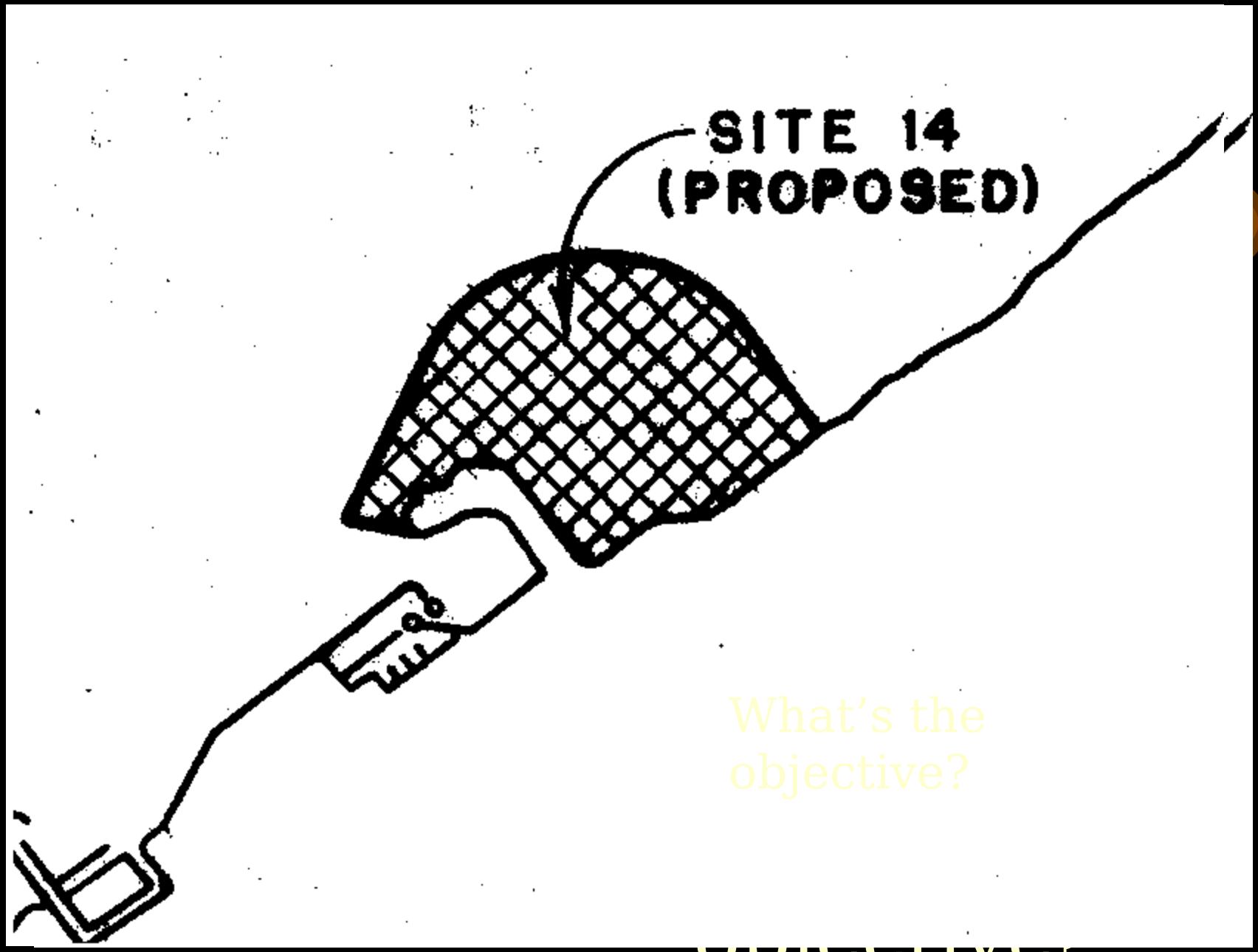
QUESTIONS?

…by the way:

- You used PLANNING OBJECTIVES to start formulating alternative plans.
- When you identified your "recommended plan" you conducted the next three planning steps:
  - Ideas were EVALUATED
  - Ideas were COMPARED
  - The best idea was SELECTED

PLANNING PROCESS





What's the objective?

Objective?

PLANS	ACHIEVEMENT OF OBJECTIVE	OTHER EVALUATION

EVALUATION METRICS

- \+ - 0
- Ranking: #1 thru #N
- % of planning objective achieved
- Make up a metric

Table 29: Summary Comparison of Detailed Plans for Duck Creek, Ohio

	No Action	NED Plan	Locally Preferred Plan
1. PLAN DESCRIPTION	No Action/Without Project Condition	Reach DC-A 25-year protection; Reach DC-B 100-year protection; & Reach DC-C 100-year protection	Sections DC-A, DC-B, DC-C Uniform 100-year level of protection
2. IMPACT ASSESSMENT			
A. National Economic Development (NED)			
(1) Project Cost (2) Annual Cost (3) Total Annual Benefits (4) Annual Net Benefits (5) Benefit to Cost Ratio	$0 $0 $0 $0 N/A Ranks 3rd	$13,895,000 $ 1,357,000 $ 1,721,000 $ 364,000 1.27 Ranks 1st	$14,817,000 $ 1,445,000 $ 1,783,000 $ 338,000 1.20 Ranks 2nd
B. Environmental Quality (EQ)			
(1) Air/Noise	Normal noise levels created by traffic, business, and industrial activities. Ranks 1st.	Temporary increased noise levels during 4-year construction period. Ranks 2nd.	Temporary increased noise levels during 4-year construction period. Ranks 3rd.
(2) Water Quality	Existing water quality is poor due to discharges into the stream from combined sewer system outfalls and flood runoff from industrial areas adjacent to the stream. Ranks 3rd.	Temporary increased turbidity levels during 4-year construction period. Contamination from flood runoff from adjacent industrial areas partially eliminated in DC-A, and fully eliminated in DC-B and DC-C. Ranks 2nd.	Temporary increased turbidity levels during 4-year construction period. Contamination from flood runoff from adjacent industrial areas eliminated for all reaches. Ranks 1st.
(3) Vegetation	Existing vegetation typical for streams in Southwest Ohio. Excellent habitat for woodland songbirds and urban wildlife. Ranks 1st.	Permanent loss of 12 acres to project features; temporary loss of 8 acres during 4-year construction period. Ranks 2nd.	Permanent loss of 13 acres to project features; temporary loss of 8 acres during 4-year construction period. Ranks 3rd.
(4) Threatened & Endangered Species	No endangered species in work area.	No impact.	No impact
(5) Aquatic Birds	Existing biological community sparse due to pollutant discharges from combined sewer systems outfalls. Ranks 3rd	Temporary decreased biota populations during 4-year construction period. Possible increase (in biota population with decrease in contaminant runoff from protected industrial areas. Ranks 1st (Tie).	Temporary decreased biota populations during 4-year construction period. Possible increase in biota population with decrease in contaminant runoff from protected industrial areas. Ranks 1st (Tie).
(6) Cultural Resources & Historic Properties	No cultural resources or historic properties in work area.	No impact.	No impact.
C. Regional Economic Development (RED)	Same as National Economic Development (NED) impacts. Ranks 3rd.	Same as National Economic Development (NED) impacts. Ranks 1st	Same as National Economic Development (NED) impacts. Ranks 2nd.

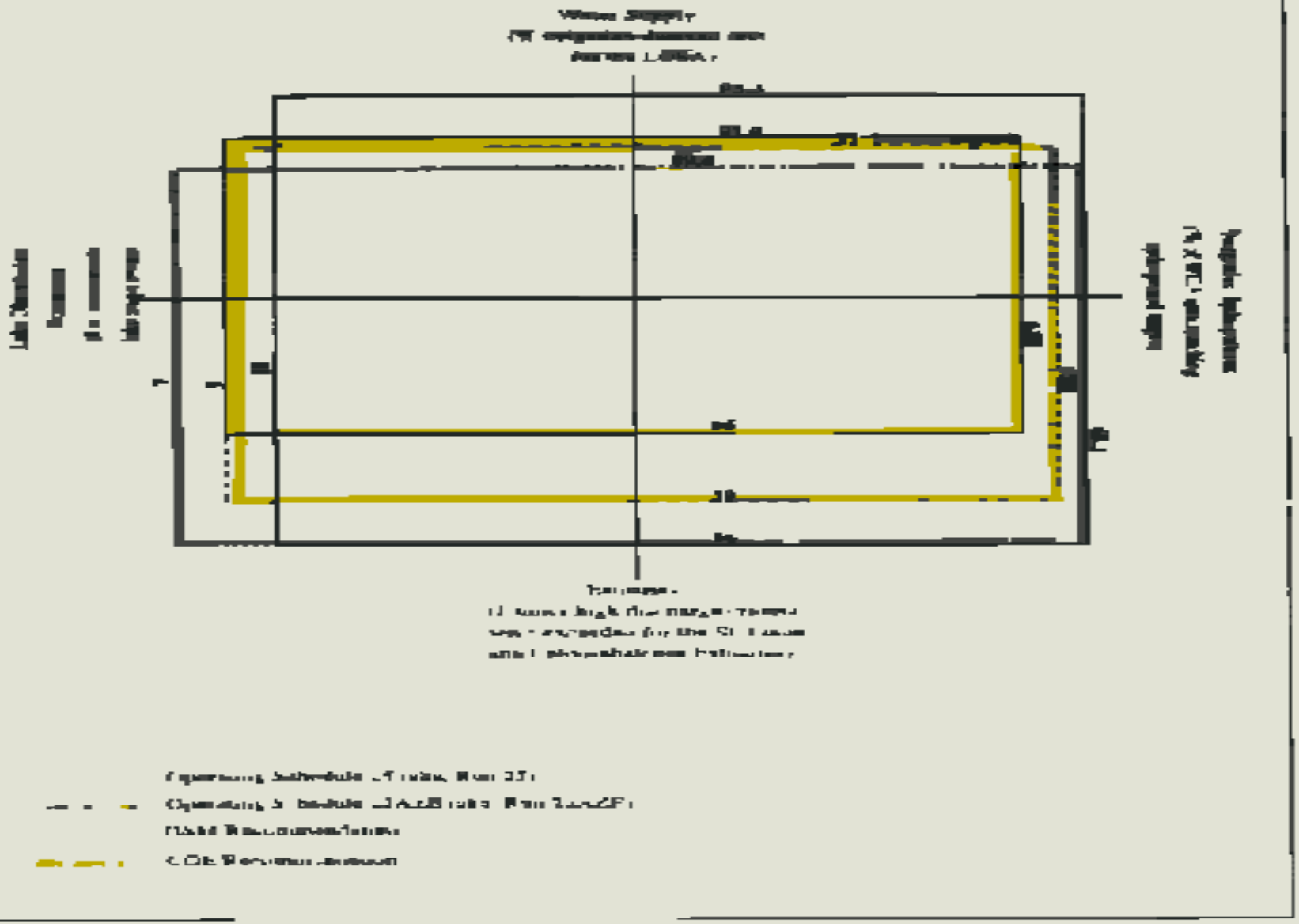


Figure 6. Multi Objective Trade-off Plot for 1990 Conditions

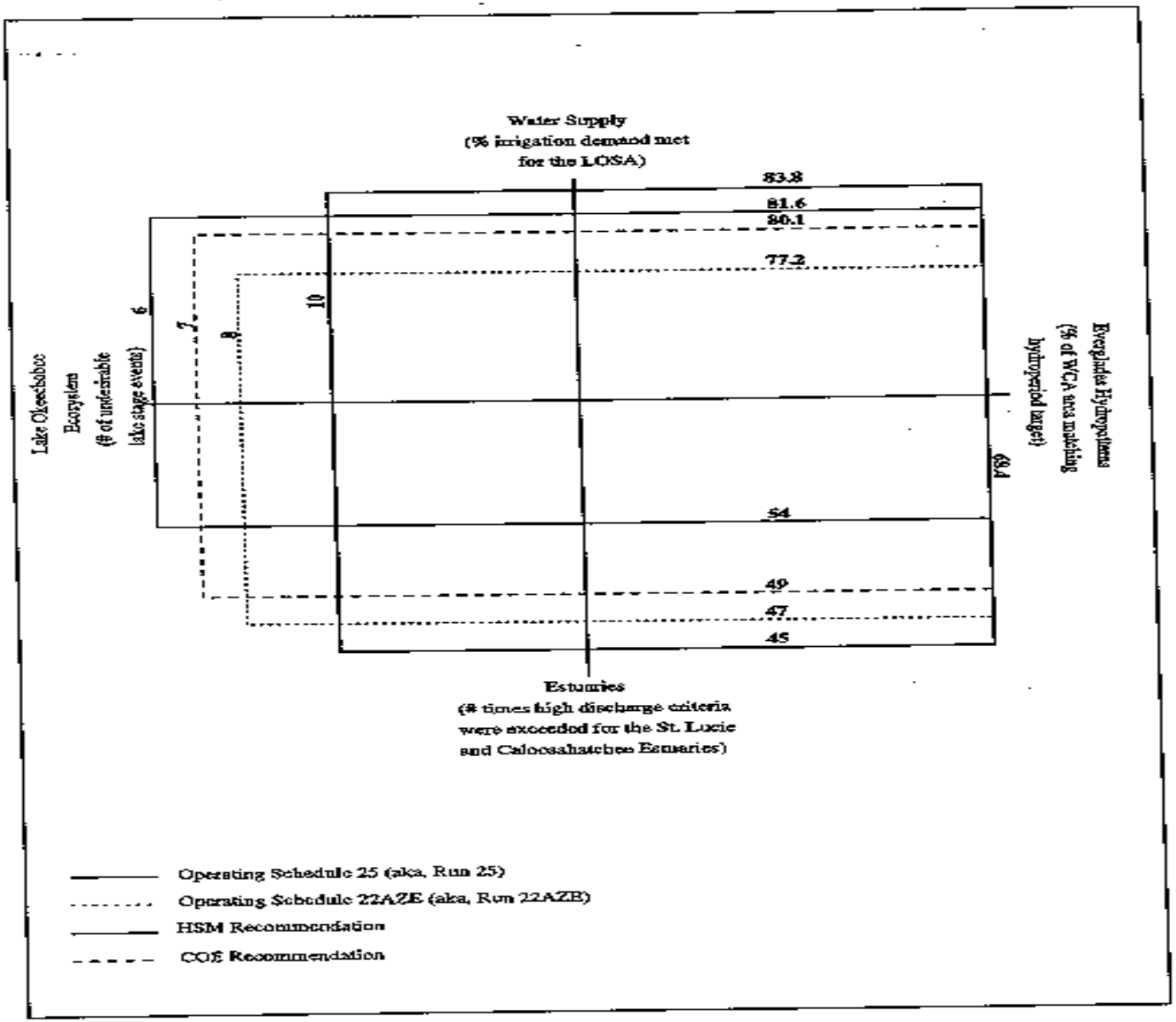
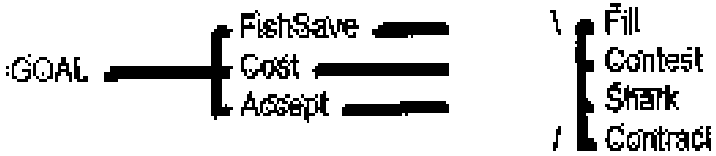


Figure 7. Multi-Objective Trade-off Plot for 2010 Condition

Select Best Plan for Cleveland Harbor



Abbreviation	Definition
GOAL	
Accept	Acceptability--is the plan "doable"
Contest	Plan 2-Hold a fishing contest for public to remove fish.
Contract	Plan 4-Contract with commercial fisherman to catch and release.
Cost	Cost of Plan Measured Qualitatively
Fill	Plan 1-Fill area from shore outward, then close.
FishSave	Number (n or %) of fish in the disposal area that are saved.
Shark	Plan 3-Get person in shark suit to scare the fish out.

Select Best Plan for Cleveland Harbor

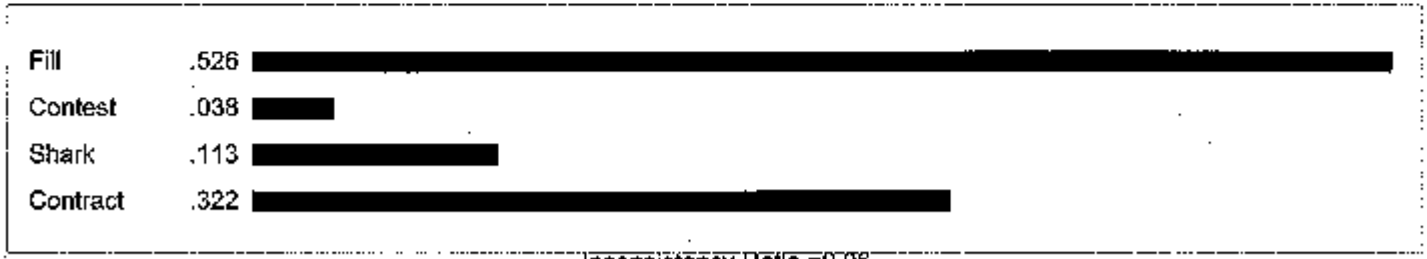
Node: 10000

Compare the relative PREFERENCE with respect to: FishSave < GOAL

1=EQUAL 3=MODERATE 5=STRONG 7=VERY STRONG 9=EXTREME

1	Fill	(9)	8	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Contest
2	Fill	9	8	7	(6)	5	4	3	2	1	2	3	4	5	6	7	8	9	Shark
3	Fill	9	8	7	6	5	4	3	(2)	1	2	3	4	5	6	7	8	9	Contract
4	Contest	9	8	7	6	5	4	3	2	1	2	3	4	(5)	6	7	8	9	Shark
5	Contest	9	8	7	6	5	4	3	2	1	2	3	4	5	6	7	(8)	9	Contract
6	Shark	9	8	7	6	5	4	3	2	1	2	3	(4)	5	6	7	8	9	Contract

Abbreviation	Definition
Goal	Select Best Plan for Cleveland Harbor
FishSave	Number (n or %) of fish in the disposal area that are saved.
Fill	Plan 1-Fill area from shore outward, then close.
Contest	Plan 2-Hold a fishing contest for public to remove fish.
Shark	Plan 3-Get person in shark suit to scare the fish out.
Contract	Plan 4-Contract with commercial fisherman to catch and release.



Inconsistency Ratio =0.06

Select Best Plan for Cleveland Harbor

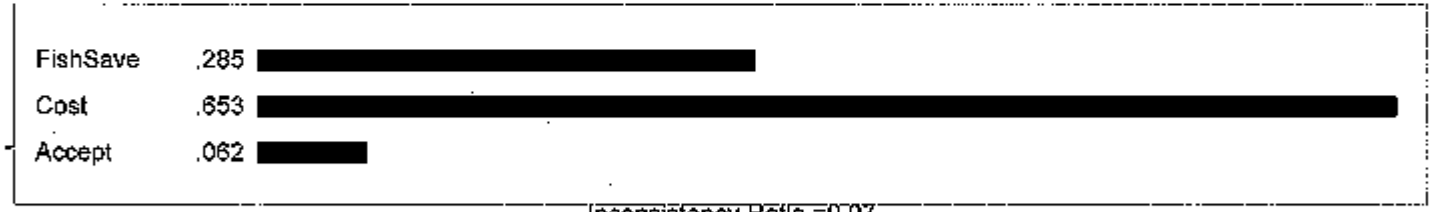
Node: 0

Compare the relative PREFERENCE with respect to: GOAL <

1=EQUAL 3=MODERATE 5=STRONG 7=VERY STRONG 9=EXTREME

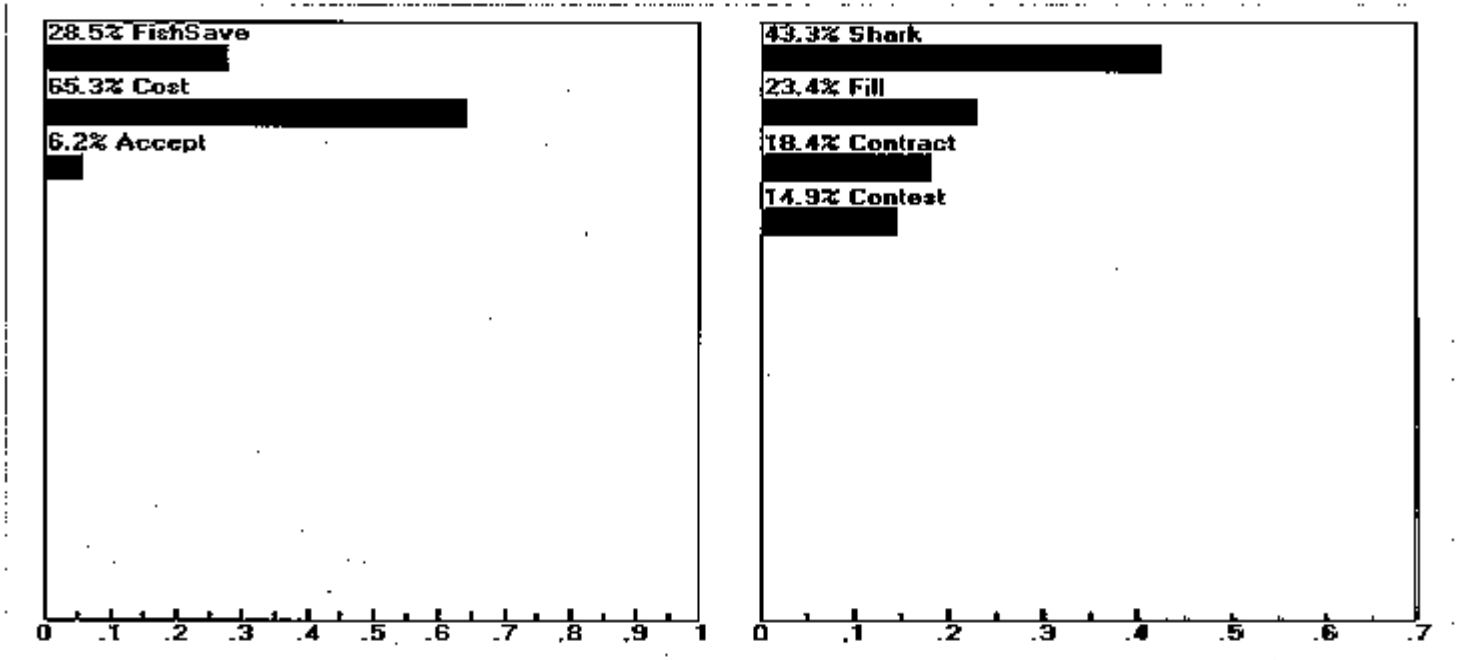
1	FishSave	9	8	7	6	5	4	3	2	1	2	(3)	4	5	6	7	8	9	Cost
2	FishSave	9	8	7	(6)	5	4	3	2	1	2	3	4	5	6	7	8	9	Accept
3	Cost	9	(8)	7	6	5	4	3	2	1	2	3	4	5	6	7	8	9	Accept

Abbreviation	Definition
Goal	Select Best Plan for Cleveland Harbor
FishSave	Number (n or %) of fish in the disposal area that are saved.
Cost	Cost of Plan Measured Qualitatively
Accept	Acceptability--is the plan "doable"



Inconsistency Ratio =0.07

Dynamic Sensitivity w.r.t. GOAL for nodes below GOAL



Abbreviation	Definition
FishSave	Number (n or %) of fish in the disposal area that are saved.
Cost	Cost of Plan Measured Qualitatively
Accept	Acceptability—is the plan "doable"

Shark	Plan 3-Get person in shark suit to scare the fish out.
Fill	Plan 1-Fill area from shore outward, then close.
Contract	Plan 4-Contract with commercial fisherman to catch and release.
Contest	Plan 2-Hold a fishing contest for public to remove fish.

PLANNING PROCESS